SECTION 1. Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product code : **ars-imago PE - Film Developer Paper**
Trades code : arspe1

1.2. Relevant identified uses of the substance or mixture and uses advised against

Photographic Process
Sectors of use:
Professional use[SU22]
Product category:
Photochemicals
Process categories:
Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)[PROC5] Uses advised against
Do not use for purposes other than those listed

1.3. Details of the supplier of the safety data sheet

ars-imago international s.r.l. ROME - ITALY
Via Caio Mario 25 00192 Rome
Tel +39 06 960 42 253
Email:info@ars-imago.com
Sito internet: www.ars-imago.com
Email technica contact: chemicals@ars-imago.com

Produced by
ars-imago international s.r.l. ROME - ITALY
Via Caio Mario 25 00192 Rome
Tel. +39 06 960 42 253

1.4. Emergency telephone number

Tel. +39 06 960 42 253

SECTION 2. Hazards identification

2.1. Classification of the substance or mixture

2.1.1 Classification according to Regulation (EC) No 1272/2008:

Pictograms:
GHS07
Hazard Class and Category Code(s):
Skin Irrit. 2, Eye Irrit. 2
Hazard statement Code(s):
H315 - Causes skin irritation.

H319 - Causes serious eye irritation.
If brought into contact with eyes, the product causes significant irritations which may last for more than 24 hours, if brought into contact with skin, it causes significant inflammation with erythema, scabs, or edema.

2.2. Label elements
Labelling according to Regulation (EC) No 1272/2008:
Pictogram, Signal Word Code(s):
GHS07 - Warning

Hazard statement Code(s):
H315 - Causes skin irritation.
H319 - Causes serious eye irritation.
Supplemental Hazard statement Code(s):
not applicable
Precautionary statements:
General
P101 - If medical advice is needed, have product container or label at hand.
P102 - Keep out of reach of children.
Prevention
P280 - Wear protective gloves protective clothing eye protection face protection.
Response
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313 - If eye irritation persists: Get medical advice attention.
Contains: Edetic acid, Potassium Carbonate an., diethylene glycol

2.3. Other hazards
The substance / mixture NOT contains substances PBT/vPvB according to Regulation (EC) No 1907/2006, Annex XIII
No information on other hazards

SECTION 3. Composition/information on ingredients
3.1 Substances
Irrelevant

3.2 Mixtures

Refer to paragraph 16 for full text of hazard statements

Substance	Concentration	Classification	Index	CAS	EINECS	REACh
Potassium Carbonate an.	> 10 <= 20%	Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335		584-08-7	209-529-3	01-2119532646-36-0010
diethylene glycol	> 1 <= 5%	Acute Tox. 4, H302; STOT RE 2, H373	603-140-00-6	111-46-6	203-872-2	01-2119457857-21
Edetic acid	> 1 <= 5%	Eye Irrit. 2, H319; Acute Tox. 4, H332; STOT RE 2, H373	607-429-00-8	60-00-4	200-449-4	01-2119486399-18
4-(hydroxymethyl)-4-methyl-1-phenylpyrazolidin-3-one	> 0,1 <= 1%	Acute Tox. 4, H302; Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335		13047-13-7	235-920-3	

SECTION 4. First aid measures

4.1. Description of first aid measures

Inhalation:
Air the area. Move immediately the contaminated patient from the area and keep him at rest in a well ventilated area. If you feel unwell seek medical advice.

Direct contact with skin (of the pure product).:
Take contaminated clothing Immediately off.
Wash immediately with plenty of running water and possibly with soap, the areas of the body that have, or are only suspected to have, come in contact with the product.

Direct contact with eyes (of the pure product).:
Wash immediately and thoroughly with running water, keeping eyelids open for at least 10 minutes, then protect your eyes with a dry sterile gauze. Seek medical advice immediately
Do not use eye drops or ointments of any kind before the examination or advice from an oculist.

Ingestion: Not hazardous. It’s possible to give activated charcoal in water or liquid paraffin medicine

4.2. Most important symptoms and effects, both acute and delayed

No data available.

4.3. Indication of any immediate medical attention and special treatment needed

If skin irritation occurs: Get medical advice attention.
If eye irritation persists: Get medical advice attention.
If medical advice is needed, have product container or label at hand.

SECTION 5. Firefighting measures

5.1. Extinguishing media

Advised extinguishing agents:
Water spray, CO2, foam, dry chemical, depending on the materials involved in the fire.

Extinguishing means to avoid:
Water jets. Use water jets only to cool the surfaces of the containers exposed to fire.

5.2. Special hazards arising from the substance or mixture

No data available.

5.3. Advice for firefighters

Use protection for the breathing apparatus
Safety helmet and full protective suit.
The spray water can be used to protect the people involved in the extinction
You may also use selfrespirator, especially when working in confined and poorly ventilated area and if you use halogenated extinguishers (Halon 1211 fluobrene, Solkan 123, NAF, etc...)
Keep containers cool with water spray

SECTION 6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1 For non-emergency personnel:

Leave the area surrounding the spill or release. Do not smoke
Wear mask, gloves and protective clothing.

6.1.2 For emergency responders:

Eliminate all unguarded flames and possible sources of ignition. No smoking.
Provision of sufficient ventilation.
Evacuate the danger area and, in case, consult an expert.

6.2. Environmental precautions

Contain spill with earth or sand.
If the product has entered a watercourse in sewers or has contaminated soil or vegetation, notify it to the the authorities.
Discharge the remains in compliance with the regulations

6.3. Methods and material for containment and cleaning up

6.3.1 For containment:
Rapidly recover the product, wear a mask and protective clothing
Recover the product for reuse, if possible, or for removal. Possibly absorb it with inert material. Prevent it from entering the sewer system.

6.3.2 For cleaning up:
After wiping up, wash with water the area and materials involved

6.3.3 Other information:
None in particular.

6.4. Reference to other sections
Refer to paragraphs 8 and 13 for more information

SECTION 7. Handling and storage

7.1. Precautions for safe handling
Avoid contact and inhalation of vapors
Wear protective gloves protective clothing eye protection face protection.
At work do not eat or drink. See also paragraph 8 below.

7.2. Conditions for safe storage, including any incompatibilities
Keep in original container closed tightly. Do not store in open or unlabeled containers.
Keep containers upright and safe by avoiding the possibility of falls or collisions.
Store in a cool place, away from sources of heat and `direct exposure of sunlight.

7.3. Specific end use(s)
Professional use:
Photographic and cinematographic treatment

SECTION 8. Exposure controls/personal protection

8.1. Control parameters

Related to contained substances:
Edetic acid:
For this material have not been established exposure limits.
- Substance: Potassium Carbonate an.
DNEL
Local effects Long term Workers inhalation = 10
Local effects Long term Workers dermal = 16 (mg/kg bw/day)
Local effects Long term Consumers dermal = 8 (mg/kg bw/day)
Local effects Long term Consumers inhalation = 10 (mg/m3)

- Substance: diethylene glycol
DNEL
Systemic effects Long term Workers inhalation = 22,11 (mg/m3)
Systemic effects Long term Workers dermal = 1,37 (mg/kg bw/day)
Systemic effects Long term Consumers inhalation = 12 (mg/m3)
Systemic effects Long term Consumers dermal = 21 (mg/kg bw/day)
Systemic effects Short term Workers inhalation = 60 (mg/m3)
Local effects Long term Workers inhalation = 22,11
Local effects Long term Consumers oral = 12 (mg/kg bw/day)
Local effects Long term Consumers inhalation = 12 (mg/m3)
PNEC
Sweet water = 3,17 (mg/l)
sediment Sweet water = 1,2 (mg/kg/sediment)
Sea water = 0,317 (mg/l)
sediment Sea water = 1,2 (mg/kg/sediment)
intermittent emissions = 10 (mg/l)
STP = 31,7 (mg/l)
ground = 0,129 (mg/kg ground)
- Substance: Edetic acid
DNEL
Systemic effects Long term Consumers inhalation = 1,5 (mg/m3)
Systemic effects Long term Consumers oral = 25 (mg/kg bw/day)
Systemic effects Short term Workers inhalation = 2,5 (mg/m3)
Local effects Short term Workers inhalation = 2,5 (mg/m3)

8.2. Exposure controls
Appropriate engineering controls:
Professional use:
Not established
Individual protection measures:
(a) Eye / face protection

When handling the pure product use safety glasses (spectacles cage) (EN 166).
(b) Skin protection
(i) Hand protection
For the selection of the most suitable gloves, see the hazard class belongs to the prepared (sect. 2), refer to the risk assessment carried out by you and, if necessary, also consult the manufacturer for selecting the most appropriate protective material. Avoid skin contact when handling the substance / preparation or a mixture by wearing protective gloves and protective clothing appropriate to the risk of 'operazione.Utilizzare gloves chemical resistant.
In case of prolonged immersion or frequently repeated contact:
Material thickness Maturing time
Nitrile rubber > = 0.38 mm > 480 min

Neoprene > = 0.65 mm > 240 min
butyl rubber > = 0.36 mm > 480 min
Avoid natural rubber gloves
(ii) Other
When handling the pure product wear full protective skin clothing.
(c) Respiratory protection
Not needed for normal use.
(d) Thermal hazards
No hazard to report
Environmental exposure controls:
Related to contained substances:
Potassium Carbonate an.:
At work do not eat, don't drink, don't smoke.
Respiratory protection equipment
In the case of recommended use of dust dust mask.
Hand protection
Wear rubber gloves approved according to EN374.
Eye protection
Safety glasses with side-shields (EN 166).
Additional information about design of technical systems
Workplaces must be adequately ventilated. Where possible, install sources of local exhaust air replacement systems and effective General. If these measures are not sufficient to maintain concentrations of particulate materials and solvent vapours below the exposure limit, you will need to make use of adequate respiratory protection.
Edetic acid:
Do not breathe dust. Avoid contact with skin.

SECTION 9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical and chemical properties	Value	Determination method
Appearance	Liquid	
Odour	Irrilevant	
Odour threshold	Irrilevant	
pH	10.60 ± 0.10 a 25 °C	pH METRO
Melting point/freezing point	Irrilevant	
Initial boiling point and boiling range	> 100 °C	
Flash point	non flammable	ASTM D92
Evaporation rate	not determined	
Flammability (solid, gas)	Irrilevant	
Upper/lower flammability or explosive limits	not explosive	
Vapour pressure	Irrilevant	
Vapour density	Irrilevant	
Relative density	1.210 ± 0.10 Kg/dm3	
Solubility	in water	

Physical and chemical properties	Value	Determination method
Water solubility	Complete	
Partition coefficient: n-octanol/water	Not determined	
Auto-ignition temperature	non flammable	
Decomposition temperature	Irrilevant	
Viscosity	Irrilevant	
Explosive properties	not explosive	
Oxidising properties	non-oxidizing	

9.2. Other information
No data available.

SECTION 10. Stability and reactivity

10.1. Reactivity
Related to contained substances:
Potassium Carbonate an.:
Specific information is not available on this product.
diethylene glycol:
No dangerous reaction if stored and used properly.
Edetic acid:
Stable under normal conditions
4-(hydroxymethyl)-4-methyl-1-phenylpyrazolidin-3-one:
Stable under recommended conditions for transport and storage.

10.2. Chemical stability
No hazardous reaction when handled and stored according to provisions.

10.3. Possibility of hazardous reactions
There are no hazardous reactions

10.4. Conditions to avoid
Nothing to report

10.5. Incompatible materials
Contact with acid liberates toxic gas

10.6. Hazardous decomposition products
Oxides of nitrogen (NOx), Sulphur dioxide

SECTION 11. Toxicological information

11.1. Information on toxicological effects

ATE(mix) oral = 213.846,2 mg/kg
ATE(mix) dermal = ∞
ATE(mix) inhal = ∞

(a) acute toxicity: Potassium Carbonate an.: Cause irritation to the mouth, throat, stomach and gastrointestinal problems

(b) skin corrosion/irritationIf brought into contact with the skin, the product causes significant inflammation with erythema, scabs, or edema.
Potassium Carbonate an.: Corrosion on contact with the eyes and can cause severe burns and deep ulcerations that can leave scars
Edetic acid: Contact with eyes: corrosive action on contact with the eyes and can cause severe burns and deep ulcerations that can leave scars.
Potassium Carbonate an.: Not reported evidence of this effect
Edetic acid: Skin contact: may cause slight irritation
4-(hydroxymethyl)-4-methyl-1-phenylpyrazolidin-3-one: May be mild irritation at the point of contact. There may be irritation and redness at the site of contact.

(c) serious eye damage/irritation: If brought into contact with eyes, the product, causes significant irritations which may last for more than 24 hours.
Potassium Carbonate an.: The seriousness of the injury depends on the concentration of the product, by time and temperature
Edetic acid: The seriousness of the injury depends on the concentration of the product, by time and temperature.
4-(hydroxymethyl)-4-methyl-1-phenylpyrazolidin-3-one: Irritating to eyes (eyes unwashed): strong Irritating to eyes (eyes washed): mild to moderate

(d) respiratory or skin sensitization: Potassium Carbonate an.: May cause slight irritation. Edetic acid: Sensitization: not reported evidence of this effect..

(e) germ cell mutagenicity: Potassium Carbonate an.: The concentration that can produce mutagenic effects strongly elevated. On the basis of the limited mutagenecit found in animals, the risk of genetic damage on 19uomo considered insignificant.
Edetic acid: Mutagenesis: the concentration which can produce mutagenic effects strongly elevated. On the basis of the limited mutagenecit found in animals, the risk of genetic damage on 19uomo considered insignificant.

(f) carcinogenicity: Potassium Carbonate an.: Not reported evidence of this effect
Edetic acid: Carcinogenicity: not reported evidence of such an effect.

(g) reproductive toxicity: Potassium Carbonate an.: Not reported evidence of such an effect.
Edetic acid: Reproduction effects: not reported evidence of such an effect.

(h) specific target organ toxicity (STOT) single exposure: based on available data, the classification criteria are not met.

(i) specific target organ toxicity (STOT) repeated exposurebased on available data, the classification criteria are not met.

(j) aspiration hazard: Potassium Carbonate an.: Cause irritation to the respiratory tract. Edetic acid: Inhalation: causes irritation to the respiratory tract. 4-(hydroxymethyl)-4-methyl-1-phenylpyrazolidin-3-one: Pu be irritation of the throat with a feeling of tension in the body.Exposure may cause coughing or wheezing. Pu absorption occur through the lungs causando sintomi similar to those of ingestion

Related to contained substances:
Potassium Carbonate an.:

The product may have harmful effects on human health.
LD50 (rat) Oral (mg/kg body weight) = 2000
LD50 Dermal (rat or rabbit) (mg/kg body weight) = 2000
CL50 Inhalation (rat) vapour/dust/mist/fume (mg/l/4h) or gas (ppmV/4h) = 5 diethylene glycol:
Harmful if ingested, it causes nausea, vomiting, gastrointestinal disorders. The product may have harmful effects on human health.
LD50 (rat) Oral (mg/kg body weight) = 19600
LD50 Dermal (rat or rabbit) (mg/kg body weight) = 13300
CL50 Inhalation (rat) vapour/dust/mist/fume (mg/l/4h) or gas (ppmV/4h) = 4,6
Edetic acid:

Routes of entry: inhalation, ingestion, contact.
Ingestion: causes irritation to the mouth, throat, stomach and gastrointestinal problems.
LD50 (rat) Oral (mg/kg body weight) = 4500
CL50 Inhalation (rat) vapour/dust/mist/fume (mg/l/4h) or gas (ppmV/4h) = 3000
4-(hydroxymethyl)-4-methyl-1-phenylpyrazolidin-3-one:
LD50 (rat) Oral (mg/kg body weight) = 556
LD50 Dermal (rat or rabbit) (mg/kg body weight) = 1000

SECTION 12. Ecological information

12.1. Toxicity

Related to contained substances:
Potassium Carbonate an.:
Ec50 (Potassium CARBONATE; Nr. CAS: 584-08-7)
Daphnia Daphnia pulex Value = 200 mg/l For. test: 48 h
Lc50 (Potassium CARBONATE; Nr. CAS: 584-08-7)
Fish rainbow trout Value = 68 mg/
C(E)L50 (mg/l) = 200
diethylene glycol:

Alga Scenedesmus quadricauda value = 2700 mg/l. Daphnia Daphnia magna test value = 84000 mg/l. test: 48 h
Acinetobacter bacteria value = 8000 mg/l. test: 4:0 pm
Fish Gambusia affinis > 32000 Value mg/l. test: 96 h
Edetic acid:
Toxicity to fish (lc50): > 100 mg/l
Toxicity to Daphnia (Ec50): > 100 mg/l
4-(hydroxymethyl)-4-methyl-1-phenylpyrazolidin-3-one:
Not applicable.
Use according to good working practices to avoid pollution into the environment.

12.2. Persistence and degradability
Related to contained substances:
Potassium Carbonate an.:
Specific information is not available on this product.
diethylene glycol:
Readily biodegradable.
Edetic acid:
Not readily biodegradable.
4-(hydroxymethyl)-4-methyl-1-phenylpyrazolidin-3-one:
Biodegradable

12.3. Bioaccumulative potential
Related to contained substances:
Potassium Carbonate an.:
Unpredictable potential for bioaccumulation.
diethylene glycol:
Not bioaccumulative.
Edetic acid:
Bioconcentration factor: ca. 1.8 (28 d), lepomismacrochirus The modest accumulation in organisms. The product was tested. The signs are derived by substances/products of similar composition or structure. 4-(hydroxymethyl)-4-methyl-1-phenylpyrazolidin-3-one:
No potential for bioaccumulation.

12.4. Mobility in soil
Related to contained substances:
Potassium Carbonate an.:
Data not available
diethylene glycol:
Specific information is not available on this product.
Edetic acid:
The substance will evaporate into the atmosphere from the surface of the water.
Unpredictable absorption to the soil solid phase.

4-(hydroxymethyl)-4-methyl-1-phenylpyrazolidin-3-one:
Easily absorbed into the ground. Not available.

12.5. Results of PBT and vPvB assessment
The substance / mixture NOT contains substances PBT/vPvB according to Regulation (EC) No 1907/2006, Annex XIII

12.6. Other adverse effects
No adverse effects

SECTION 13. Disposal considerations
13.1. Waste treatment methods

Do not reuse empty containers. Dispose of them in accordance with the regulations in force. Any remaining product should be disposed of according to applicable regulations by ddressing to authorized companies. Recover if possible. Operate according to local or national regulations.

SECTION 14. Transport information

14.1. UN number
Not included in the scope of application regulations concerning the transport of dangerous goods: by road (ADR); by rail (RID); by air (ICAO / IATA); by sea (IMDG).

14.2. UN proper shipping name
None

14.3. Transport hazard class(es)
None

14.4. Packing group
None

14.5. Environmental hazards
None

14.6. Special precautions for user
No data available.

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code
It is not intended to carry bulk

SECTION 15. Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Related to contained substances:
Potassium Carbonate an.:
National provisions, pericolosity class for water:
Pericolosity class 1 water (WGK1) (Classif. According to lists): a little dangerous.
Counted among the vitamin and mineral substances permitted for the manufacture of food supplements in accordance with Legislative Decree No. 169 May 21, 2004 "implementation of Directive 2002/46/EC on food supplements".
VOC Regulations (Ministerial Decree No. 44 1/16/2004): not applicable
Ozone-depleting substances (regulation 1005/2009): not applicable
Fluorinated greenhouse gases (regulation 842/2006): not applicable persistent organic pollutants (Council Regulation 850/2004): not applicable for placing on the market of biocidal products (Legislative Decree No. 174/2000 Government):
not applicable
Export and import of dangerous chemicals (689/2008 Regulation): not applicable
Legislative Decree. 02/03/1997 n. 52 (Classification, packaging and labeling of dangerous substances). Legislative Decree 14/03/2003 n. 65 (Classification, packaging and labeling of dangerous substances). Legislative Decree. 02/02/2002 n. 25 (Risks related to chemical agents at work). D.M. 26/02/2004 Work (Exposure Limits Professional);
D.M. 03/04/2007 (Implementation of Directive n. 2006/8 / EC). Regulation (EC) No. 1907/2006 (REACH), Regulation (EC) No. 1272/2008 (CLP), Regulation (EC) 790 / 2009.D.Lgs. September 21, 2005 n. 238 (Seveso Ter).

15.2. Chemical safety assessment

No chemical safety assessment was carried out by the supplier

SECTION 16. Other information

16.1. Other information

Points modified compared to previous release: 2.3. Other hazards, 8.1. Control parameters, 10.5. Incompatible materials, 10.6. Hazardous decomposition products, 11.1. Information on toxicological effects, 13.1. Waste treatment methods
Description of the hazard statements exposed to point 3
H315 = Causes skin irritation.
H319 = Causes serious eye irritation.
H335 = May cause respiratory irritation.
H302 = Harmful if swallowed.
H373 = May cause damage to organs through prolonged or repeated exposure

H332 = Harmful if inhaled.
Classification based on data of all mixture components
Main normative references:
Directive 1999/45/EC
Directive 2001/60/EC
Regulation 1272/2008/EC
Regulation 2010/453/EC
Regulation 529/2012 and subsequent updates
This data sheet cancels and replaces any previous edition.